MEMORANDUM

To: Mr. Gary Price
    Superintendent
From: Randy Farley
Subject: Board Agenda
Date: 5/15/2019

The C&I Department is requesting a match of funds for a grant we are applying for. We want to apply for the YouthTouch grant, which would supply us with a Hydraulift fluid power training system for STEAM education.

Grant: $19,700.00
County Match: $9,850.00
YouthTouch Grant Proposal
Margie Suder

I propose a program for the Marion County School’s STEAM Bus to work with the third and fourth grade students on robotics, hydraulics, and a program using the Goldenrod’s Youth Touch Program. YouthTouch offers creative learning tools, designed to complement existing curriculum and support instructional standards. The YouthTouch Technology Integration comprehensive package comprises all of the tools necessary to integrate technology into 3rd through 8th grade classrooms. The YouthTouch package is designed to provide students with a firmer understanding of ratios, area, coordinates, graphing, plus over 100 other Science, Technology, Engineering, Math, Language Arts, and Social Studies concepts. This would also be part of the curriculum and the first step in ensuring equipment and technology for the possibility of a future STEAM Stationary Lab for the eight Marion County middle schools.

“Goldenrod designs and builds an array of hands-on learning tools created for students. Special software provides a unique opportunity to program a real-world robotic arm, RoboArm. Younger students use a joystick-controlled robotic arm, RoboAC, to reinforce learning. RoboVue is a miniature closed-circuit television camera that easily attaches to RoboArm and RoboAC.

A tabletop fluid power training system, HydrauLift, uses common tap water for power. HydrauLift2, a more advanced system, is controlled by students from a personal computer. YouthTouch stations allow students to produce immediate results that they can see and touch.

Tempest, an electronic console that suspends plastic balls on columns of air, incorporates RoboAC in student challenges, which are designed to develop teamwork and analytical skills. Automated timing and scoring create further incentives for students to participate.

What the YouthTouch package consists of:

Each elementary school awarded a grant for the YouthTouch Technology Integration System will receive from Goldenrod Research Corporation the following:

1. Four RoboAC (joystick-controlled robots for younger students)
2. Four RoboArm (intelligent robotic trainers)
3. Two RoboVue (closed circuit camera for use with robots)
### Section 1 – Applicant Data

**Please complete the fields below. (Type or print clearly)**

<table>
<thead>
<tr>
<th>Application Data:</th>
<th>April 27, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of School:</td>
<td>Marion County School District</td>
</tr>
<tr>
<td>School Mailing Address:</td>
<td>1516 Mary Lou Retton Drive Fairmont, WV 26554</td>
</tr>
<tr>
<td>Phone:</td>
<td>304-367-2100</td>
</tr>
<tr>
<td>Fax:</td>
<td>304-367-2181</td>
</tr>
<tr>
<td>Principal:</td>
<td>Mr. Randall Farley</td>
</tr>
<tr>
<td>Principal's e-mail:</td>
<td><a href="mailto:rdfarley@k12.wv.us">rdfarley@k12.wv.us</a></td>
</tr>
<tr>
<td>Applicant:</td>
<td>Margie Suder</td>
</tr>
<tr>
<td>Applicant’s email:</td>
<td><a href="mailto:msuder@k12.wv.us">msuder@k12.wv.us</a></td>
</tr>
<tr>
<td>Local Newspaper(s): name &amp; location</td>
<td>Times West Virginian P.O. Box 2530 Fairmont, WV 26554</td>
</tr>
</tbody>
</table>

**Please provide the following information as applicable.**

<table>
<thead>
<tr>
<th>Name of School District or Authority:</th>
<th>Marion County Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your school is:</td>
<td>□ Inner City □ Urban □ Suburban □ Rural</td>
</tr>
<tr>
<td>Which grades are in the school?</td>
<td>Kindergarten through Fourth Grade</td>
</tr>
<tr>
<td>Number of students enrolled in the school:</td>
<td>3200</td>
</tr>
<tr>
<td>Average number of students per classroom:</td>
<td>24</td>
</tr>
<tr>
<td>Percentage of students receiving free or reduced price lunches:</td>
<td>50.1%</td>
</tr>
<tr>
<td>Number of elementary schools in the district:</td>
<td>11</td>
</tr>
</tbody>
</table>
Section 2 – Grant Narrative

Please replace this page with institution letterhead and respond with one paragraph per prompt. You will be given points for each question below. Scores will determine the grant recipients.

Grant Worthiness Questions

1. Please describe your school, community, faculty and student body. (10 points)

   Marion County is a more rural county within the state of WV. Marion County Schools is an above average, public school district located in FAIRMONT, WV. We have 8,105 students in grades PK, K-12 with a student-teacher ratio of 14 to 1. According to state test scores, 39% of our students are at least proficient in math and 53% in reading. I am the STEAM Teacher for all eleven elementary schools in the county. Six of our eleven schools are located within the city limits of Fairmont, WV. The other five elementary schools are located in the more rural communities surrounding Fairmont within Marion County. I serve all 119 Kindergarten through fourth grade classrooms in the county. We have 119 teachers and 31 teacher’s aids within those classrooms. Although we do have some veteran, master teachers in those classrooms, more than half of the faculty is now comprised of teachers that have only been teaching 1-5 years.

2. Why do you believe technology integration is valuable? (10 points)

   I believe that technology integration within our classrooms and teaching is incredibly valuable. Not only does it increase motivation to learn, it also allows for more engaged students. It has the capacity to bring the world into the classroom through simulation, virtual investigations, telecommunications, and mechanics/robotics. This exposure helps students become prepared for our technological world. Students can use the technology to engage in valuable problem solving skills and exposure to logical thinking processes. They can have the opportunity to create new and unique products that can solve problems within our schools, communities, nation and world. Technology integration is the way that students can interact with curriculum so that it becomes meaningful to them.

3. List your goals for using YouthTouch to enhance the learning process. (10 points)

   My goal for using the YouthTouch is to bring technology integration to all eleven elementary schools through the use of Marion County Schools STEAM Bus. I am the coordinator and teacher on this mobile classroom. The STEAM Bus, called the STEAM Machine, travels to all eleven elementary schools to offer Science, Technology, Engineering, Art, and Mathematics projects and curriculum to our kindergarten through fourth grade classrooms. I will be setting up the YouthTouch lab and utilizing the curriculum to instruct the third and fourth grade classrooms with robotics, hydraulics, and programming. This allows me to enhance the learning of the engineering design process, scientific method, science curriculum, critical and creative thinking, problem solving and mathematical practices to the 58 classrooms of students that I instruct. Marion County Schools is also planning the development of a middle school STEAM lab for the 2020-2021 school year in which the YouthTouch equipment and curriculum will be utilized with the
eight middle schools in our county.

4. Describe at least one objective you hope to achieve in the first year of implementation and tell us how you will measure achievement. (15 points)

One objective that I hope to achieve is to increase the engagement of our students in the STEAM curriculum and interest in STEAM professions. I will be measuring the achievement of this goal by providing the teachers of the classrooms I work with an interest inventory and survey for their students. I will be monitoring the effect of this instruction on the students’ participation in STEM/STEAM clubs and extracurricular teams, their engagement in STEM/STEAM instruction in their classroom, and the students’ interest in STEM/STEAM professions in the future. This will be documented through the teacher surveys and student interest inventories.

5. How will you implement and manage the YouthTouch program in your school? (20 points)

The YouthTouch program and its equipment will be set up on the STEAM bus to travel to all eleven elementary schools. Before the year begins, I will provide the classroom teachers with a student interest inventory about STEM/STEAM learning and STEM/STEAM professions. I will also provide the classroom teacher with a survey of their level of comfort with technology integration within the classroom and with STEM/STEAM curriculum. Then, I will bring all 58 third and fourth grade classrooms individually with their classroom teacher on the bus twice throughout the year to provide them with in-depth instruction in hydraulics, robotics, and programming. The curriculum and equipment for the YouthTouch program will be kept on the STEAM Bus and maintained by me. I will be the provider of the instruction to the students and their classroom teachers. After the two sessions that I will provide for the students and their teachers, I will again distribute the student interest inventory and teacher survey to monitor the effect of this program on increasing student interest in STEM/STEAM learning and professions and increasing teacher comfort with technology integration and STEM/STEAM instruction in their classroom.

6. Describe the staff development component of your implementation and management plan? (20 points)

The staff development component of the implementation and management plan involves the classroom teacher being involved in the instruction that I will provide to the students on the STEAM Machine. Teachers often feel intimidated by technology integration with their students. I want them to see first-hand what the instruction looks like, how it is implemented and managed, and the students’ engagement in the curriculum. Since they will not be responsible for the instruction at first, this takes away the fear and anxiety from the classroom teacher and enables them to visualize what this type of instruction would look like in their classroom. It allows the teachers to see how manageable this type of learning is and how much student engagement and learning occurs. At the end of the school year, I will be offering professional development on technology integration in the classroom and the YouthTouch program to the teachers in our county. This professional development session will be the second layer of instruction teachers often need to implement a new teaching strategy.

7. Explain how you will sustain and grow the YouthTouch program in your school long term, especially if the original teachers have left the school. (20 points)
Since hands-on professional development will be offered to all third and fourth grade teachers in our county through exposure on the STEAM Bus and then the professional development sessions, I believe that the technology integration and YouthTouch program will grow to several more schools in our county. Marion County Schools is also planning on the future of the STEAM program through the development of a STEAM Stationary Lab for the middle schools where the YouthTouch program will be implemented. In addition, since I am STEAM instructor for all the elementary schools in our county, 58 teachers will get an in-depth exposure to the program, see its value and effect on students, and continue to carry on with this type of instruction.

8. If awarded the grant, how will you share your YouthTouch experience with other school stakeholders, outside your building? Such stakeholders would include district administration, other schools in the district, parents, the community at large and Goldenrod Research. If you state that you will send Goldenrod pictures or tweets, for example, we’ll expect them! (15 points)

Since I am the only elementary STEAM teacher in our county and I service all eleven elementary schools, all of our schools will see the YouthTouch experience in action with their own students. In addition, my office is stationed in the Marion County Board of Education building where I have direct contact with my Curriculum and Instruction Coordinator and the County Superintendent. I will also present this proposal to the Marion County Board of Education at their meeting. Since all elementary students in our county have opportunities to learn on the STEAM Machine, students go home excited to tell their parents about what they did on the STEAM Bus that day. This has already proven to be the case this past year, and word of Marion County School’s STEAM Machine and its programs have already been shared to our community at large. If awarded this grant, I will also send Goldenrod pictures of the students working with the YouthTouch program within the school year of 2019-2020.
Section 3 – Grant Application Certification and Approval

We, the undersigned, acknowledge and certify that all information provided in this application is accurate. In addition, if a grant is awarded to us, and we accept it, we agree to honor the ongoing program requirements expected of awardees. If awarded, we agree to accept or decline the grant within 15 days of award notification. If accepted, we agree to issue an authorized purchase order in the amount of $9,850, plus freight charges, to Goldenrod Research Corporation.

Principal’s signature    Date    Applicant’s signature    Date

Grantor:
Goldenrod Research Corporation
204 W. Saint Joseph Street
Spalding, NE 68665
888-827-2260
Fax (815) 346-2338

Web site: http://goldenrodresearch.com
4. Two **HydrauLift** (manual fluid power trainers)
5. One **HydrauLift**³ (computer-interfaced fluid power trainer)
6. One **Tempest** (programmable system using 2 robots to teach problem solving, communication, and teamwork skills)
7. One Full day of on-site teacher training. Extremely remote/limited access communities may receive training via distance learning modalities.
8. One Full year warranty on all components (RoboArm carries a three year warranty)
9. One Resource Box of Curriculum Integration Materials (CIM) with the following items:
   - Teacher's Guide (4 copies) to teacher-led and independent study, with remedial and accelerated activities
   - Teacher's Resource Guide (4 copies) for lesson planning
   - 127 different reproducible student worksheets (15 copies of each)
   - Introductory Activities for getting started
   - Learning aids and manipulatives
10. One Full year of upgrades to software and CIM.

The YouthTouch program and its equipment costs $19,700.00. I have applied for a YouthTouch grant that provides 1:1 funding for a YouthTouch Technology Integration System. Our match to this grant may be drawn from any available public and private funding sources. This grant provides for half of this cost ($9,850) and your school will be responsible for the remaining balance of $9,850 plus the freight and applicable taxes. If we would be awarded the grant and accept it, we will be expected to honor the following:

- YouthTouch will be used with students on a frequent basis.
- You will work with Goldenrod to assure the YouthTouch program is successful.
- A faculty member must be designated as the YouthTouch contact person.
- The designated contact person must be empowered and instructed to communicate with Goldenrod about all facets of your school's experience with YouthTouch.
- Your school will serve as a referral site for prospective schools to visit.
- Your school will serve as host of a YouthTouch workshop for area educators. Goldenrod will arrange and conduct this workshop.